

A high-speed train and a tram are shown on tracks in a rural setting. The high-speed train is on the left, and the tram is on the right. The background shows a hillside with trees and a utility pole. The text is overlaid on the image.

Supervision of the implementation of new SMS Requirements

Human & organisational factors and safety culture

Anthony Byrne

Presentation expectations...



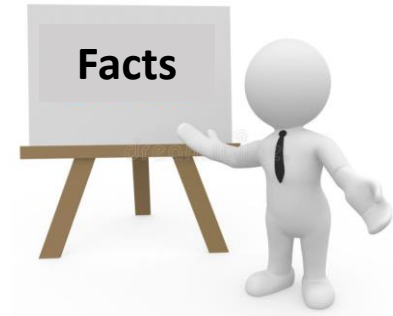
Background



SMS
Requirements



CRR
Expectations



Conclusions





“We cannot, will not, and must not hide behind human error.”

Answer: The Greek Prime Minister, Kyriakos Mitsotakis

Q. What is Human and Organisational Factors?
What does it mean to you?

Q. What is/are Human and Organisational Factors?

'Anything that affects human performance'

Its considering the human within the system throughout the life-cycle!

Q. How can we do that ?

A. By embedding HOF and SC into our SMSs

Embedding HOF & SC into our SMSs

The Old

10 EN Official Journal of the European Union

COMMISSION REGULATION (EU) No 1158/2010
of 9 December 2010
on a common safety method for assessing conformity with the requirements for obtaining railway safety certificates
(Text with EEA relevance)

EUROPEAN COMMISSION,

regard to the Treaty on the Functioning of the European Union,

regard to Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on Safety on Community's railways and amending Council Directive 2000/9/EC of 16 February 2000 on the technical specifications for interoperability of the trans-European high-speed rail system,

appropriate contractual arrangements, including the General Contract of Use (GCU), ensure that the vehicle has an entity in charge of maintenance responsibility for vehicle maintenance in accordance with Article 14a of Directive 2004/49/EC. The information between the parties should specify the exchange of information between both undertakings and guarantee the safe operation of vehicles.

(Text with EEA relevance)

EUROPEAN COMMISSION,

(3) National safety authorities assess the ability of the structure manager to comply with all the requirements required to operate in general and on the

The New

EN Official Journal of the European Union

COMMISSION DELEGATED REGULATION (EU) 2018/762
of 8 March 2018
establishing common safety methods on safety management system requirements pursuant to Directive (EU) 2016/798 of the European Parliament and of the Council and repealing Commission Regulations (EU) No 1158/2010 and (EU) No 1169/2010
(Text with EEA relevance)

EUROPEAN COMMISSION,

regard to the Treaty on the Functioning of the European Union,

regard to Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (1), and in particular Article 6(6) thereof,

CRR (high Level) expectations

- The ROs SMS should document how it..
 - **recognises** that **human behaviour** plays a central role in the safe and efficient operation of the railway (tramway)
 - **identifies** the **actions and behaviours** that can shape a positive **safety culture**
 - **promotes** through their SMS a **culture of mutual trust**, confidence and learning
 - **encourages** staff to contribute to the development of safety by **reporting** dangerous occurrences and providing safety-related information.
- There are 5 key SMS requirements that will be checked

CSM SMS HOF-SC Requirements

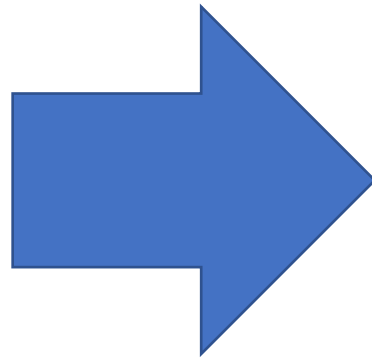
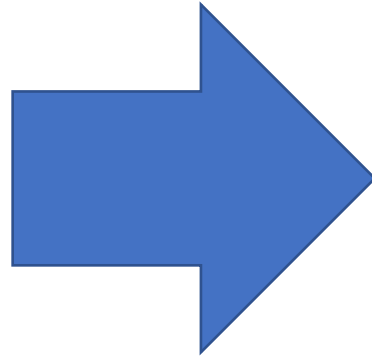
SMS Requirement 2.1.1 ~

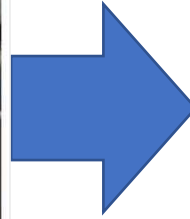
Promoting a positive safety culture

What CRR Inspectors will be looking for?

- Simply put ... evidence of promoting a positive safety culture.
- Possible sources of evidence might be..
 - Your Safety Policy
 - Management involvement – Safety Tours etc.
 - Safety feedback (2-way communication)
 - Just culture initiatives, standards or OPs
 - Safety forums / safety awards/recognition
 - Workshops, surveys etc..







SMS Requirement 3.1.1.1 ~

....risk arising from human and organisational factors...

What CRR Inspectors will be looking for?

- Evidence of managing HF risks
- Possible sources of evidence might be..
 - Internal standards
 - Task Analysis & Risk Assessment (cognisant of HF risks?)
 - Safe systems of work (WAI-WAP-WAD)
 - Workload Management, overload, underload, fatigue
 - Internal audit/monitoring activities



SMS Requirement 4.2.1(a) ~

...competencies required for safety-related tasks

What CRR Inspectors will be looking for?

- Evidence of competence management.
- Possible sources of evidence might be..
 - Internal Standards - CMS
 - Job descriptions and safety responsibilities documented and briefed
 - HF Expertise in-house, HF awareness training, NTS training
 - Psychological testing (Drivers)
 - Periodic medicals for safety critical staff

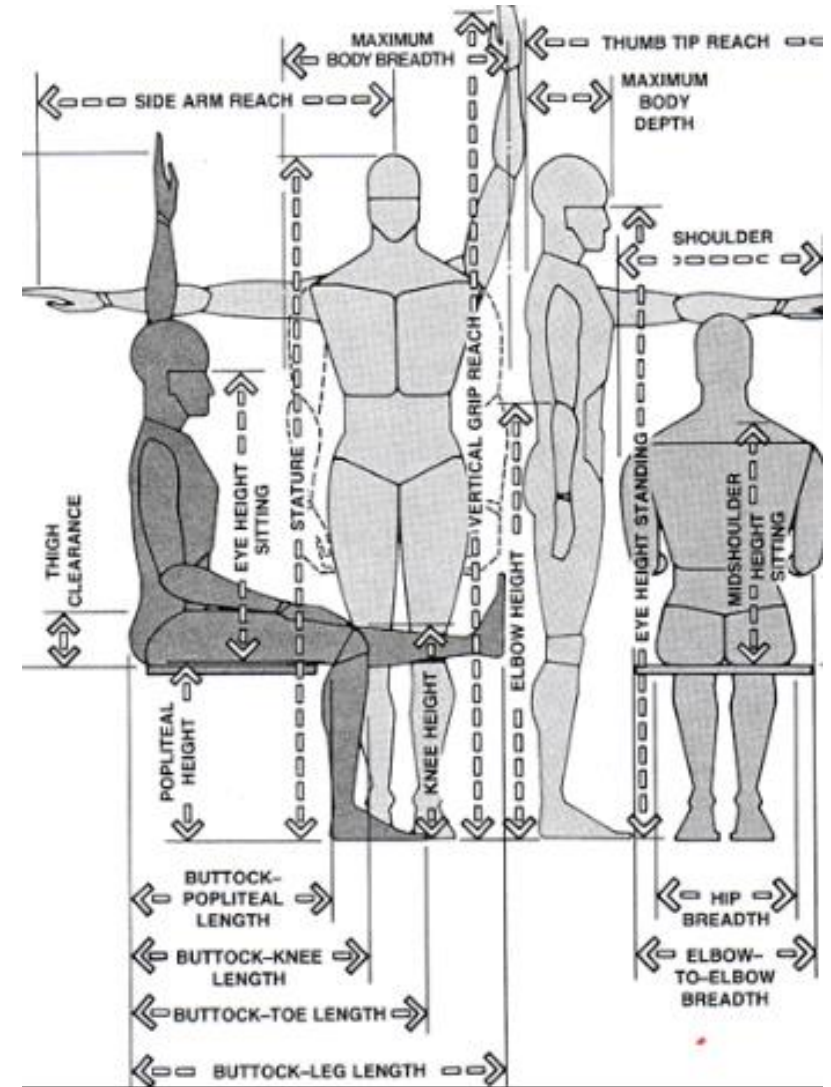


SMS Requirement 4.6 ~

Integrating human and organisational factors

What CRR Inspectors will be looking for?

- Evidence of integrating HF thinking across the SMS.
- Possible sources of evidence might be..
 - Internal Standards – HF Integration, management of risk/change (HF considered?),
 - Existence of a HF Strategy (how HF is integrated within the RO, expertise, techniques etc..)
 - HF awareness training for managers/others
 - HF embedded in accident/incident investigations
 - Project files with evidence of HF consideration, e.g., workload, job design, HMI, the work environment etc.

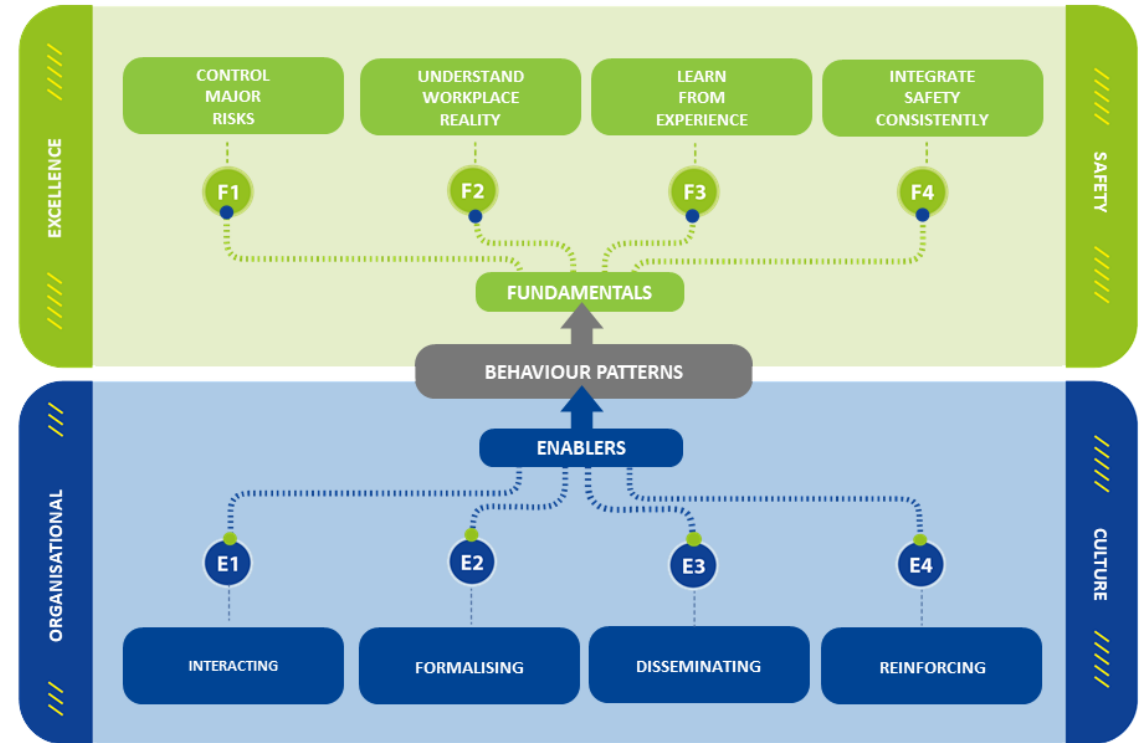


SMS Requirement 7.2.3 ~

A strategy to continually improve its safety culture

What CRR Inspectors will be looking for?

- Simply put ...evidence of a safety culture strategy, management review & KPIs
- Possible sources of evidence might be..
 - Internal Standards – Health & Wellbeing, Safety Culture
 - Evidence of continuous improvement – safety initiatives e.g., close call reporting – implementing a just culture and attitude towards blame
 - Evidence of staff engagement, e.g., Safety forums, workshops/ SC surveys
 - Occurrence trends, self reporting, learning/ actions being taken



ERA Safety Culture Model

Conclusions

- Embedding HOF into your organisation is good for business but requires management commitment, resource and time.
- There are 5 high level SMS requirements (involving HOF & SC)
 - safety culture, human and organisational factors risks, competence required for safety-related tasks, HOF Integration & a strategy to continually improve Safety Culture
- CRR recognise that changing culture will take time
- CRR Supervision will likely check;
 - 'compliance' in year 1-3 of a certification life cycle but
 - 'compliance and effectiveness' in years 4 and 5.

A final thought.

If we always try to make the right thing to do the easy thing to do then we have a far greater chance of succeeding !

References / Further Reading

- The following are available via the ERA website
 - ERA Guide on supervision
 - ERA Guide on safety management system requirements
 - European Railway Safety Culture Model

